

SOLE STRUCTURE OF WORKING SHOE

BACKGROUND OF THE INVENTION

1. Field of the Invention

[0001] The present invention relates to a sole structure of working shoe, and more particularly to a sole that is stitched to an upper by a stitching along the contour of the sole with uniform stitching thickness in order to increase the strength of the sole structure.

2. Description of Related Art

[0002] A conventional working shoe is designed for some dangerous working environments, like a welding plant, a high temperature environment, and a slippery condition.

[0003] Referring to Figure 1, a conventional working shoe has an upper 11, a middle sole 12, a lower sole 13, and a heel 14. The upper 11 is stitched to the middle sole 12 by a stitching 15. The lower sole 13 gums to the middle sole 12, and at last the heel 14 gums to the lower sole 13. However, in some special environments, the working shoes have to provide waterproof, heatproof, greaseproof, and skidproof functions, but the binding method of conventional arts of working shoes has problems because the gum, bonding each layer of the sole, would be melted under the hot condition. Besides, in the other method of one conventional art that the lower sole 13 is stitched to the middle sole 12 by a stitching 15, the stitching 15 is directly stitched along the contour of the lower sole 13 and is not covered so that the stitching 15 would be worn more often during the working in dangerous environments and it would lead to diminish the utility of the working shoes.

[0004] Taiwan Patent Application No. 89207471, which is filed by the present inventor, discloses a sole structure of working shoe. Referring to Figure 2,

the sole structure of working shoe has an upper 31 stitched to the periphery of a sole 32 by a stitching 35. The sole 32 has a heel 33, according to the heel, and a front portion 34, according to the toes, which are extended from the surface of the sole 32. Each overall size of the heel 33 and the front portion 34 is smaller than the overall size of the sole 32, and therefore the stitching 35 would be stitched along the edge of the sole 32.

[0005] To overcome the shortcomings, the present invention tends to provide a sole structure of working shoe to mitigate the aforementioned problems.

[0006] In order to alleviate the aforementioned problems of the conventional arts, a sole structure of working shoe is designed meticulously. On the basis of inventor's practice according to the work, the present invention is useful, and it can solve the problems and limits of the conventional arts.

[0007] To attain the above-stated object, in a sole structure of working shoe having an upper which is stitched to the periphery of the sole by a stitching, and the characteristic is that a gadroon forms along the outer periphery of a part of the sole where the heel portion extended. The result is that the gadroon has a quite depth for stitching so that the stitching stitches the sole under the upper along the contour of the sole with uniform stitching thickness.

[0008] About a preferred embodiment of the present invention, the sole structure of working shoe having an upper which is stitched to the periphery of the sole by a stitching, and the characteristic is that a gadroon forms along the outer periphery of a part of the sole where the heel portion extended and a front portion according to the toes and extended from the surface of the sole has an overall size which is smaller than the sole. The result is that the gadroon has a quite depth for

stitching and the stitching would be stitched along the contour of the sole with uniform stitching thickness.

[0009] The present invention has improvements described as follows. First, the whole sole is bonded with the upper by a stitching, and therefore it would never have problems about the gum. Moreover, the stitching would not contact the ground directly and be protected from wear. Finally, the present invention not only improves the strength of the bond and prevents the damage of the wear but also makes the users more comfortable.

BRIEF DESCRIPTION OF THE DRAWINGS

[0010] In order to more fully explain the features and advantages of the present invention, the following preferred embodiments of a shoe according to the invention are described, as examples only without any limitative character, with reference to the accompanying drawings, in which:

[0016] Figure 1 is a perspective view of a conventional sole structure of working shoe;

[0017] Figure 2 is a plan view of another conventional sole structure of working shoe;

[0018] Figure 3 is a perspective view of a preferred embodiment of the sole structure of working shoe of the present invention;

[0019] Figure 4 is a sectional view according to the heel of the shoe of Figure 3;

[0020] Figure 5 is a perspective view of another preferred embodiment of the sole structure of working shoe of the present invention;

[0021] Figure 6 is a front view of the shoe of Figure 5.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

[0022] Referring to Figure 3, a sole structure of working shoe in accordance with the present invention has an upper 1 that is stitched to the periphery of the sole 2 by a stitching 22f.

[0023] The sole 2 has a lower sole 22, constructed by a front portion 22a, a shank 23, and a heel portion 22b. The front portion 22a, according to the toes, and the heel portion 22b, according to the heel, are extended from the surface of the sole 2. The shank 23 is hung in the air because the heel portion 22b is thicker than the front portion 22a. Referring to Figure 4, a gadroon 22c forms along the outer periphery of a part of the sole 2 where the heel portion 22b extended, and the gadroon 22c has a quite depth for stitching so that the stitching 22f stitches the sole 2 under the upper 1 along the contour of the sole 2 with uniform stitching thickness.

[0024] Referring to Figures 5 and 6, the sole structure of working shoe in accordance with the present invention wherein the gadroon 22c is filled up with a welt 22g. The welt 22g is a decoration and makes the shoes fancy. Furthermore, the welt 22g can prevent the gadroon 22c dirty and protect the stitching 22f from wear. Finally, the welt 22g can reflect light in the dark to improve the safety of the users.

[0025] Referring to Figure 7, the sole structure of working shoe in accordance with the present invention wherein the front portion 22a forms an annular portion 22d surrounding an inner portion 22e. The annular portion 22d is the surrounding part of the front portion 22a, and the inner portion 22e is the other part, the inner part, of the front portion 22a. The inner portion 22e is thicker than the annular portion 22d so that the stitching 22f stitches the sole 2 under the upper 1 along the contour of the sole 2 with uniform stitching thickness.

[0026] About the said sole structure of working shoe of the present invention, the upper 1 is stitched to the sole 2 along the contour of the sole 2 by the

stitching 22f with uniform stitching thickness so that the combinative strength of the upper 1 and the sole 2 is stronger and do not be degummed.

[0027] It is to be understood, however, that even though numerous characteristics and advantages of the present invention have been set forth in the foregoing description, together with details of the structure and function of the invention, the disclosure is illustrative only, and changes may be made in detail, especially in matters of shape, size, and arrangement of parts within the principles of the invention to the full extent indicated by the broad general meaning of the terms in which the appended claims are expressed.